

8. (Amended) A spread-spectrum communication apparatus comprising a module as in claim 5.
9. (Newly Added) A receiver comprising an integrated circuit device as in claim 6.
10. (Newly Added) A spread-spectrum communication apparatus comprising an integrated circuit as in claim 6.

REMARKS

The specification has been amended to include headings in accordance with US practice.

The Abstract of the Disclosure has been amended to eliminate reference numbers and to comply with MPEP 608.01(b).

The claims have been amended to removed all multiply dependencies therefrom and to place them into proper U.S. format.

Consideration and allowance of application is respectfully requested.

Attached hereto is a marked up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made."

Respectfully submitted,

6/23-03
Date


Paul D. Greeley
Attorney for Applicant(s)
Registration No. 31,019
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.
One Landmark Square, 10th Floor
Stamford, CT 06901-2682
(203) 327-4500

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Specification

Please amend the specification as follows:

On page 1, between lines 2 and 3, insert --- 1. **Field of the Invention** ---.

On page 1, between lines 6 and 7, insert --- 2. **Discussion of the Background Art** ---.

On page 2, before line 1, insert --- **SUMMARY OF THE INVENTION** ---.

On page 3, before line 10, insert --- **BRIEF DESCRIPTION OF THE DRAWINGS** --

On page 3, before line 21, insert --- **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT** ---.

In The Abstract

Please amend the abstract as follows:

ABSTRACT OF THE DISCLOSURE

Fast acquisition procedure for TDD W-CDMA

The present invention is related to a A method for the acquisition of burst synchronisation signals in a spread spectrum communication system, comprising the following steps:

- 1) Receiving a burst synchronisation signal,
- 2) Applying to the received burst synchronisation signal a dwelling procedure according to a scheduling scheme, whereby the dwelling procedure comprises the steps of calculating a matched filter output, summing the outputs over one slot time, calculating the energy in the sum, searching the maximum energy value and passing it to a Random Access Memory,
- 3) Based on the scheduling scheme containing a set of $X=(N+1)/2$ hypotheses, being numbered $0, 1, \dots, X-1$ and N being the number of slots in 1 frame, the slots being numbered $0, 1, \dots, N-1$, a dwelling procedure being performed in hypothesis $n=0, \dots, X-2$ in slots $n, n+N-D$ and $n+D$ and in hypothesis $n=X-1$ in slots n and $n+D$, D being the longest distance in slots between two sync slots,
- 4) At the end of the scheduling scheme searching for the overall maximum energy value among the energy values stored in the Random Access Memory,

Wherein the scheduling scheme is built up by

- (a) choosing any hypothesis from the set of hypotheses,
- (b) performing dwelling procedure in the frame slots as indicated in the chosen hypothesis,
- (c) leaving one slot open after the last dwelling procedure for the chosen hypothesis,
- (d) choosing an hypothesis not used yet, having in the next available slot a dwelling procedure in that slot and not in the subsequent slot or having in the next available slot a dwelling procedure in that slot as well as in the subsequent,
- (e) performing dwelling procedure in the frame slots as indicated in the chosen hypothesis,
- (f) leaving one slot open after the last dwelling procedure for said hypothesis, and

(g) repeating (d-f) until all hypotheses have been used, whereby in case there is no unused hypothesis that matches, the slot is left empty and the following slot is used.

In The Claims

Please amend the claims as follows:

4. (Amended) A method for the acquisition of burst synchronisation signals according to claim 1 as in any of the previous claims, wherein N=15 and D=8.

5. (Amended) A module for the acquisition of burst synchronisation signals, comprising means for applying a method as in any of the previous claims. method for the acquisition of burst synchronisation signals in a spread spectrum communication system, comprising the following steps:
 - 1) receiving a burst synchronisation signal,
 - 2) applying to said received burst synchronisation signal a dwelling procedure according to a scheduling scheme, whereby said dwelling procedure comprises the steps of calculating a matched filter output, summing said outputs over one slot time, calculating the energy in said sum, searching the maximum energy value and passing it to a Random Access Memory,
 - 3) based on said scheduling scheme containing a set of $X=(N+1)/2$ hypotheses, being numbered 0,1,...,X-1 and N being the number of slots in 1 frame, the slots being numbered 0,1,...,N-1, a dwelling procedure being performed in hypothesis $n=0,...,X-2$ in slots $n, n+N-D$ and $n+D$ and in hypothesis $n=X-1$ in slots n and $n+D$, D being the longest distance in slots between two sync slots,

4) at the end of the scheduling scheme searching for the overall maximum energy value among the energy values stored in said Random Access Memory, whereby said scheduling scheme is built up by: (a) choosing any hypothesis from said set of hypotheses, (b) performing a dwelling procedure in the frame slots as indicated in the chosen hypothesis, (c) leaving one slot open after the last dwelling procedure for said chosen hypothesis, (d) choosing an hypothesis not used yet, having in the next available slot a dwelling procedure in that slot and not in the subsequent slot or having in the next available slot a dwelling procedure in that slot as well as in the subsequent, (e) performing a dwelling procedure in the frame slots as indicated in the chosen hypothesis, (f) leaving one slot open after the last dwelling procedure for said hypothesis, (g) repeating (d-f) until all hypotheses have been used, whereby in case there is no unused hypothesis that matches, the slot is left empty and the following slot is used.

6. (Amended) An integrated circuit device, comprising a module for the acquisition of burst synchronisation signals, comprising means for applying a method as in any of the previous claims, method for the acquisition of burst synchronisation signals in a spread spectrum communication system, comprising the following steps:

- 1) receiving a burst synchronisation signal,
- 2) applying to said received burst synchronisation signal a dwelling procedure according to a scheduling scheme, whereby said dwelling procedure comprises the steps of calculating a matched filter output, summing said outputs over one slot time, calculating the energy in said sum, searching the maximum energy value and passing it to a Random Access Memory,
- 3) based on said scheduling scheme containing a set of $X=(N+1)/2$ hypotheses, being numbered 0,1,...,X-1 and N being the number of slots

in 1 frame, the slots being numbered 0,1,...,N-1, a dwelling procedure being performed in hypothesis $n=0,...,X-2$ in slots n , $n+N-D$ and $n+D$ and in hypothesis $n=X-1$ in slots n and $n+D$, D being the longest distance in slots between two sync slots,

- 4) at the end of the scheduling scheme searching for the overall maximum energy value among the energy values stored in said Random Access Memory, whereby said scheduling scheme is built up by: (a) choosing any hypothesis from said set of hypotheses, (b) performing a dwelling procedure in the frame slots as indicated in the chosen hypothesis, (c) leaving one slot open after the last dwelling procedure for said chosen hypothesis, (d) choosing an hypothesis not used yet, having in the next available slot a dwelling procedure in that slot and not in the subsequent slot or having in the next available slot a dwelling procedure in that slot as well as in the subsequent, (e) performing a dwelling procedure in the frame slots as indicated in the chosen hypothesis, (f) leaving one slot open after the last dwelling procedure for said hypothesis, (g) repeating (d-f) until all hypotheses have been used, whereby in case there is no unused hypothesis that matches, the slot is left empty and the following slot is used.

6.as in claim 5.

7. (Amended) A receiver comprising a module as in claim 5 or an integrated circuit device as in claim 6.
8. (Amended) A spread-spectrum communication apparatus comprising a module as in claim 5 or an integrated circuit device as in claim 6.
9. (Newly Added) A receiver comprising an integrated circuit device as in claim 6.

10. (Newly Added) A spread-spectrum communication apparatus comprising an integrated circuit as in claim 6.